```
                                      *                       *      *  * ***
SEQ ID NO:04   L-LDST-L---------RETNS---LPNSLAES--TCYLAPAFRRADSVPCVEMDPMD
SEQ ID NO:06   T-RPIP-LC--------PSKPNC---RPNSLAGS--TCYLAPAFCRADSLLRLEMDPMD
SEQ ID NO:10   ------------------------------------------------------MDPMD
SEQ ID NO:14   ICVSAT-TC--------SPPPPCSSHHPHHLLQSVDSSFL-PLFFR--------MEPMD
SEQ ID NO:20   ESPPATRSCLRAHRRRPSPPSPSSGPPVPGGTRRRRRPQAQAPSRFR------RRGMDPMD
SEQ ID NO:22   ------------------------------------------------------MDPMD
SEQ ID NO:41   ------------------------------------------------------MDPMD
                                                                        60

                ****  ***  **  * ********************* ******  *   *  ** *
SEQ ID NO:04   IVGKSKEDVSLPKSTMVKIIKEMLPPDVRVARDAQDLLVECCVEFINLLSSESNEVCSRE
SEQ ID NO:06   IVGKSKEDVSLPKSTMFKIIKEMLPPDVRVARDAQDLLVECCVEFINLLSSESNEVCSRE
SEQ ID NO:10   IVGKSKEDVSLPKSTMFKIIKEMLPPDVRVARDAQDLLVECCVEFINLLSSESNEVCSRE
SEQ ID NO:14   IVGKAKEDASLPKATMTKIIKEMLPPDVRVARDAQDLLIECCVEFINLVSSESNEVCNKE
SEQ ID NO:20   IVGKSKEDVSLPKSTMTKIIKEMLPPDVRVARDTQDLLVECCVEFINLLSSESNDVCSRD
SEQ ID NO:22   IVGKSKEDVSLPKSTMTKIIKEMLPPDVRVARDTQDLLVECCVEFINLLSSESNDVCSRD
SEQ ID NO:41   IVGKSKEDASLPKATMTKIIKEMLPPDVRVARDAQDLLIECCVEFINLVSSESNDVCNKE
1                                                                      120

                ********  **   ** * ****  * **** *  *****      *  * ** *****
SEQ ID NO:04   EKKTIAPEHVIKALSDLGFREYIEEVYAAYEQHKLETL-DSPKAGKFT-RIEMTEEEAVA
SEQ ID NO:06   EKKTIAPEHVIKALSDLGFREYIEEVYAAYEQHKLDTL-DSPKAGKFT-GIEMTEEEAVA
SEQ ID NO:10   DKKTIAPEHVLRALQDLGFREYIEEVQAAYEHHKHDTL-DSPKASKFT-GVEMTEEQAVA
SEQ ID NO:14   ERRTIAPEHVLKALGVLGFGEYIEEVYAAYEQHKLETMQDSLKGAKWSNRAEMTEEEALA
SEQ ID NO:20   DKKTIAPEHVIRALQDLGFKEYVEEVYAAYEQHKLETL-DSPKATKFT-GIEMTEEEAVA
SEQ ID NO:22   DKKTIAPEHVIRALQDLGFKEYVEEVYAAYEQHKLETL-DSPKATKFT-GIEMTEEEAVA
SEQ ID NO:41   DKRTIAPEHVLKALQVLGFGEYIEEVYAAYEQHKYETMQDTQRSVKWNPGAQMTEEEAAA
121                                                                    180
```

FIG. 1A

Title: Plant Genes Encoding DR1 & DRAP1 A
Global Repressor Complex of Transcription
Inventor: Stephen M. Allen
Application: Unknown
Docket: BB1107US CQN

2/15

```
181                                                                          240
SEQ ID NO:04  EQQRMFAEARARMNGAPKPKEPEQEPPQLPQAQPQ--LQLHTEPQQPMQSQVQLHSQTQ
SEQ ID NO:06  EQQRMFAEARARMNGAPKPKETEQEPPQQPQAQPQ--LQLHTEPQQPVQSQVQLHSPTQ
SEQ ID NO:10  EQQRMFAEARARMNGAAKPKEPEPEAQQQTQQPPQ--PQLHPQPQQPLQPQLHPQPQ
SEQ ID NO:14  EQQRMFAEARARMNGGAI--QSKEPEADQ-S------
SEQ ID NO:20  EQQRMFAEARARMNGAAKPKEPALEPQNQPQQPPQPHLQLHPQAQQPPQPQPQLHHPQS
SEQ ID NO:22  EQQRMFAEARARMNGAAKPKEPALEPQNQPQQPPQPHLQLHPQAQQPPQPQPQLHYPQS
SEQ ID NO:41  EQQRMFAEARARMNGGVSVPQPEHPETDQRS------

241                                                                          300
SEQ ID NO:04  HY---LQPQLQLHHQPQQLPQVQLHSQPQL------QPQVHLHPQPQLPPQLQVHQQLQQ
SEQ ID NO:06  HS---LQPQVQLHPQPQQLPQVQVHSQTQLHPQ-PQQPQVQVHPQLQQLPQLQAHSQPPQ
SEQ ID NO:10  QQPSQLHPQQLLHPQSQQTPQ----PQPQVHPQ-PQQPP-QLQPQPQLLQQPQLPQQLQ-
SEQ ID NO:14  QQPLHPQLQPYTQAPPQQPLHPQLQPYTQAPPQQPLQPLQLYPQAQPEQPLQPQSSGST
SEQ ID NO:20  QQPL---QPFTQAPPQQPLHPQLQQYTQAPPQQPLQPLQLYPQAQPEQPLQPQSSGST
SEQ ID NO:22
SEQ ID NO:41  ------

301                                                                          360
SEQ ID NO:04  PPQQVQVHQQPEVQPQEAQLQSSAQQTSQPQPQAQ----------L-QSQGHSQAQLQAGLLGQ
SEQ ID NO:06  P-QVQIHPQPQ-QPPQVQLQSSVQQTSQPQPQVH--------LYNHRGGSQAQLQPQLPGQ
SEQ ID NO:10  -PQSQLPPQPQ-QPPQLQLQSQLHPQQQPPQLQ-------P-QPQLHQQPQPQAELQSQ
SEQ ID NO:14  TGTCVISTAAPSATGTTAAATSAPAIPA----------------ISTAAPSATPADASAAAAA
SEQ ID NO:20  TGTCVISAAAPSATGTLLLQPPPQQSPQSQLHQQPQPTLVPPPQPQPQPLELQQPQPL
SEQ ID NO:22
SEQ ID NO:41  ------
```

FIG. 1B

Title: Plant Genes Encoding DR1 & DRAP1 A
Global Repressor Complex of Transcription
Inventor: Stephen M. Allen
Application: Unknown
Docket: BB1107US CON

3/15

```
                        *
SEQ ID NO:04            LQTQAQTGPDMDS
SEQ ID NO:06            LQTQGQTGPGIDS
SEQ ID NO:10            SQPQTEHGLD-SS
SEQ ID NO:14            -----------LES
SEQ ID NO:20            AATSTP-----AT
SEQ ID NO:22            TQLQAEHGLDWDS
SEQ ID NO:41            -------------PQS
                       361         373
```

FIG. 1C

Title: Plant Genes Encoding DR1 & DRAP1 A
Global Repressor Complex of Transcription
Inventor: Stephen M. Allen
Application: Unknown
Docket: BB1107US CON

4/15

```
                    *  *** ********** **  **   *  ***** **  *  ****    *    *
SEQ ID NO:28    ---MRKKLGTRFPAARIKKIMQADEDVGKIALALAVPVLVSRALELFLQDLIDRTYEITLQS
SEQ ID NO:32    ---MRKKLGTRFPAARIKKIMQADEDVGKIALALAVPVLVSRALELFLQDLIDRTYEITLQS
SEQ ID NO:34    ---MRKKLDTRFPAARIKKIMQADEDVGKIALALAVPVLVSKALELFLQDLCDRTYEITLQR
SEQ ID NO:40    --TRRKKLGTRFPAARIKKIMQADEDVGKIALALAVPVLVSRALELFLQDLIDHSYKITLQS
SEQ ID NO:42    MPSKKKKYNARFPPARIKKIMQTDEEIGKVAAAVPVIISRALELFLESLLKKACQVTQSR
                1                                                         60

                *** *    *** ****  *   *  *   **
SEQ ID NO:28    GAKTLNSFHLKQCVKRYSSFDFLTEVVSKVPDL----GGADSCGDERVLPRRRKS--NGS
SEQ ID NO:32    GAKTLNSFHLKQCVRRYSSFDFLTEVVNKVPDL----GGADSCGDDRALPRRRKALPNGS
SEQ ID NO:34    GAKTMNSLHLKHCVQSYNVFDFLRDVVSRVPDYSHGHGHAEAGPDDRAIAKRRKAVGDDG
SEQ ID NO:40    GAKTLNSFHLKQCVKRYSSFDFLTEIVNKVPDL----GGGESCGDERGLPRRRK-FSNGS
SEQ ID NO:42    NAKTMTTSHLKQCIELEQQFDFLKDLVASVPDM-QGDGEDNHMDGDKGARRGRKPGSGGR
                61                                                        120

                **               ****************       *
SEQ ID NO:28    DPENDESRSSKM--AIRNANTSPRGRGRGRGRGRGRGRPPTKRKEVGYVQFEDESSMFAEQ
SEQ ID NO:32    DPENEESRSSKM--AVRSANISPRGRGRGRGRGRGRGRGRPPTKRKEVGYVQFEDESSMFADQ
SEQ ID NO:34    NDSDEEAKRSKMHELGHTGSTGRGRGRGRGRGRGRGRPPLNR-EIYHQDAESEPCTSVQP
SEQ ID NO:40    DPENEEPRSSKM--PIRSLNTSPRGRGRGRGRGRGRGRPPTKRKEIGYVQFEDESSMFAEQ
SEQ ID NO:42    KNGGMGTKSK----------------------------------------DKKLSGTD
                121                                                       180

                                         *    *                 *
SEQ ID NO:28    GET------------------LPGEGTVPEINSGNEITPQ---------STQPPLTAPAQA
SEQ ID NO:32    GEA------------------LPGEETVPETIHGTESVPP--------STHPPAEAPSAA
SEQ ID NO:34    SNPQNTNTSVAMDSGSESKEIPKEQNIAVPVESTDSLRNIDLNAITNENDDKKASAAADA
SEQ ID NO:40    SEP------------------LPGDEIVPETNRGNESIPQ---------SSHPLVEAPSAM
SEQ ID NO:42    SEQEDESEDTDTDGEEETSQPPPQASHPSAHFQSPPTPFLPFA-----STLPLPPAPPGP
                181                                                       240
```

FIG. 2A

Title: Plant Genes Encoding DR1 & DRAP1 A
Global Repressor Complex of Transcription
Inventor: Stephen M. Allen
Application: Unknown
Docket: BB1107US CON

5/15

```
                 *         *     *         *    *    *
              *         **       *  **           * ******   *
SEQ ID NO:28  T----NSKVEEA-STDHQ----SDWPMPDATGNIGVGPSGFGHLTVQVDEDE-DYDNED-
SEQ ID NO:32  EIPAPNPKVEEAKNDDHQ---PDWPMPDAIGNIGVGPSGFGHLTVQVDEDE-DYDNED-
SEQ ID NO:34  SVPEPDASVPEPPTESKHEEIPGWSLSD-VDKMAIDSLQLAQLGRPLEEDEEDYDEEEG
SEQ ID NO:40  T-PAVISKVEEA-STNHQ---PDWPMPDAIGGIGVGPSSFGHLTVQVDEVE-DYDNED-
SEQ ID NO:42  SAPD--------------------------------------EEDEEDYDS--
              241                                             299
```

FIG. 2B

Title: Plant Genes Encoding DR1 & DRAP1 A
Global Repressor Complex of Transcription
Inventor: Stephen M. Allen
Application: Unknown
Docket: BB1107US CON

6/15

FIG. 3B

FIG. 3A

7/15
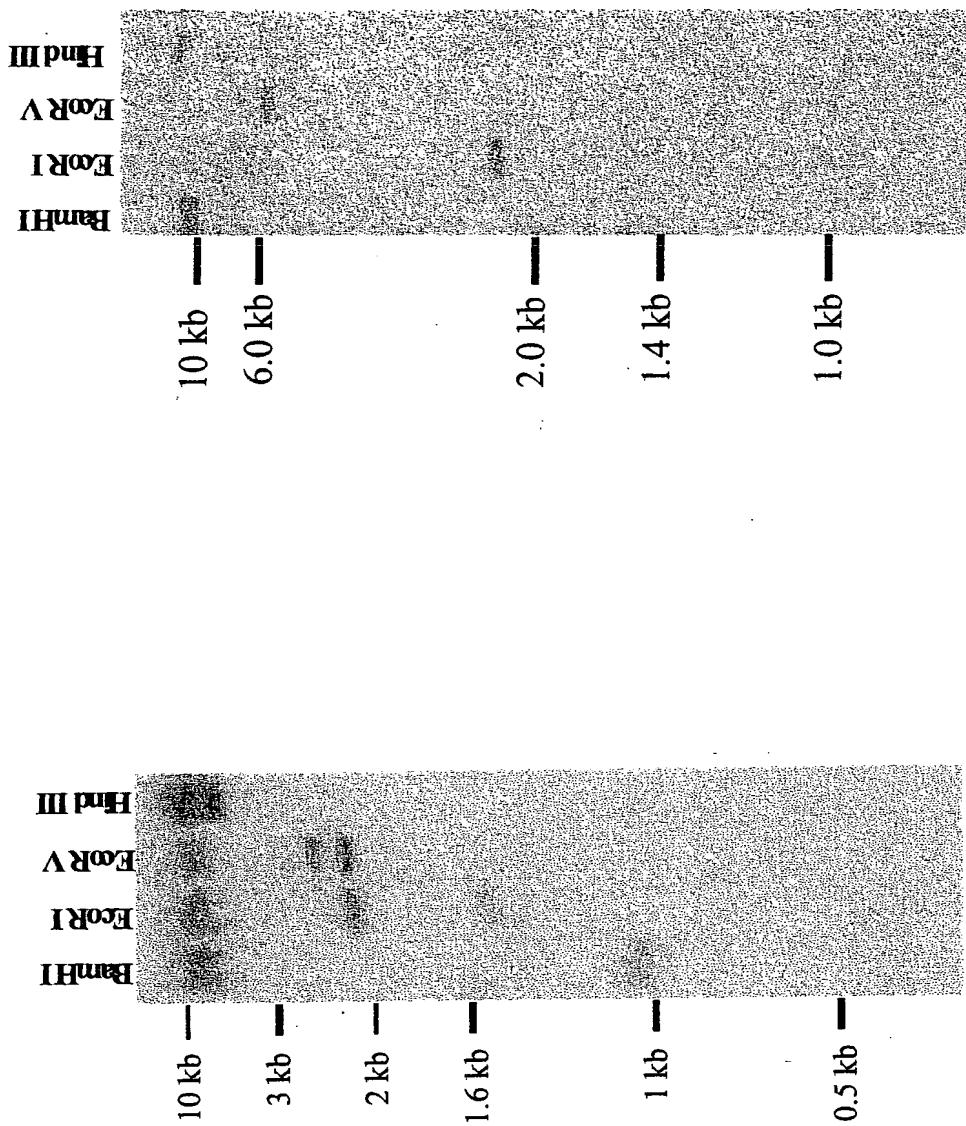
pBDGal4::rDRAP1

Gal4BD	rDrAp1

pADGal4::rDr1

Gal4AD	rDr1

FIG. 4A

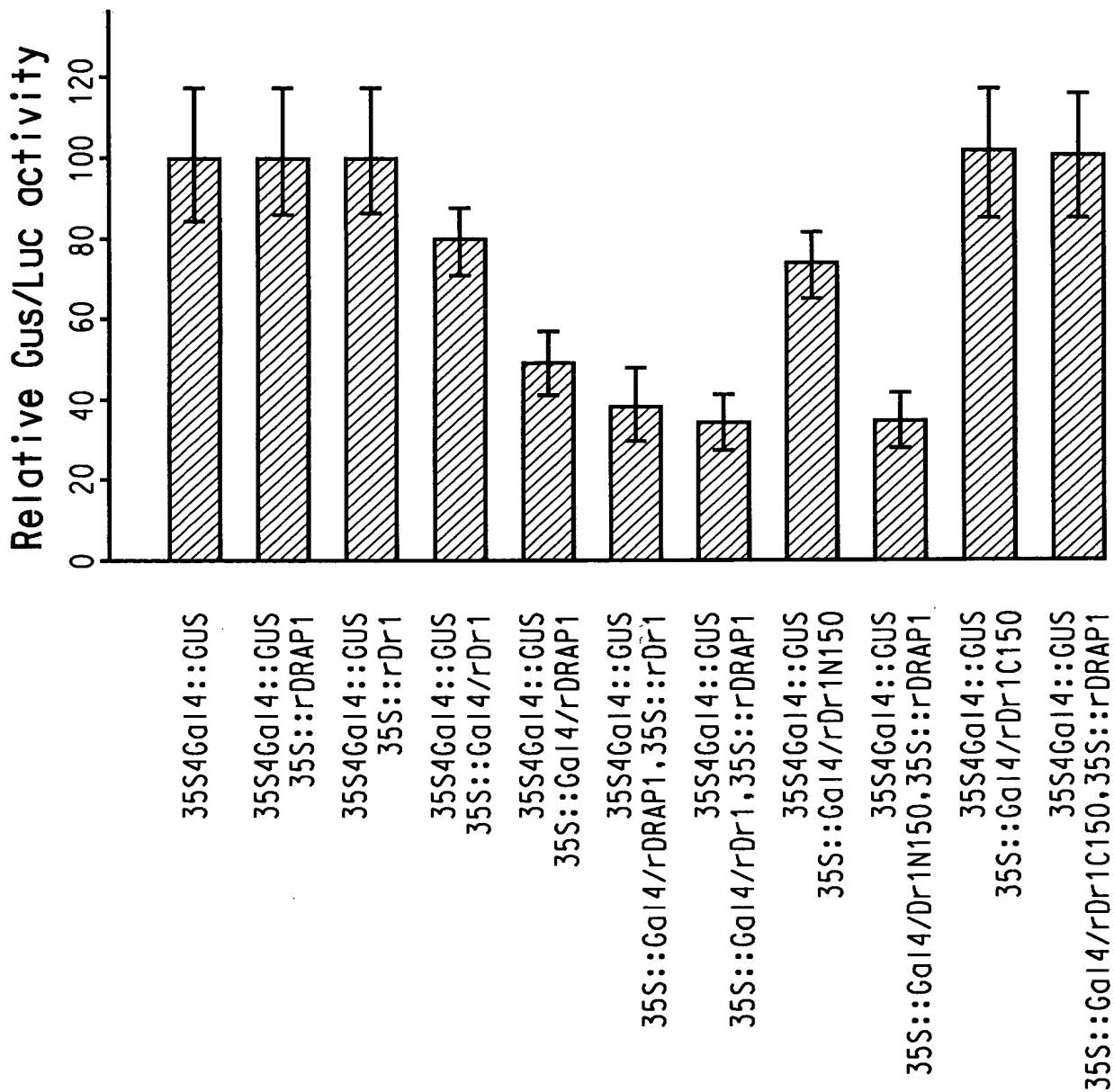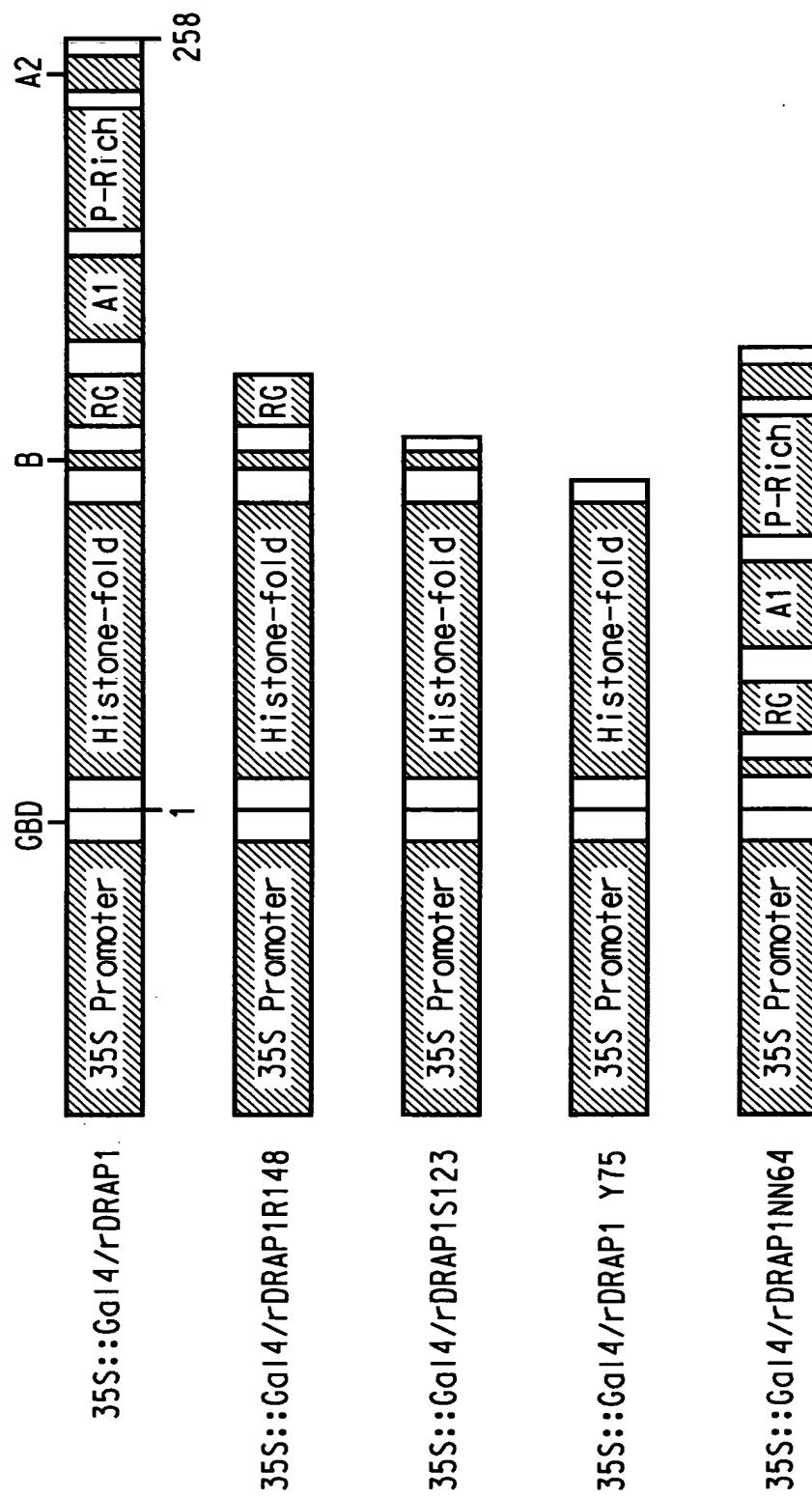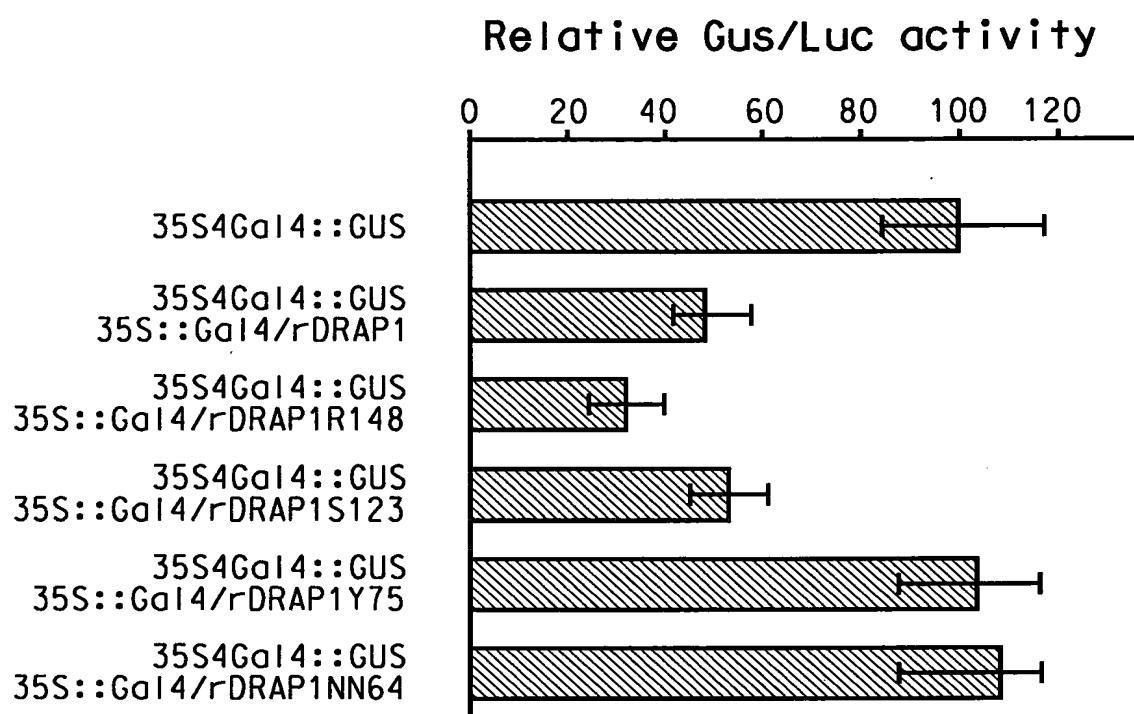**FIG. 4B**

FIG. 4C

FIG. 5A

FIG. 5B

FIG 6A

Title: Plant Genes Encoding DR1 & DRAP1 A
Global Repressor Complex of Transcription
Inventor: Stephen M. Allen
Application: Unknown
Docket: BB1107US CON

12/15

Relative Gus/Luc activity
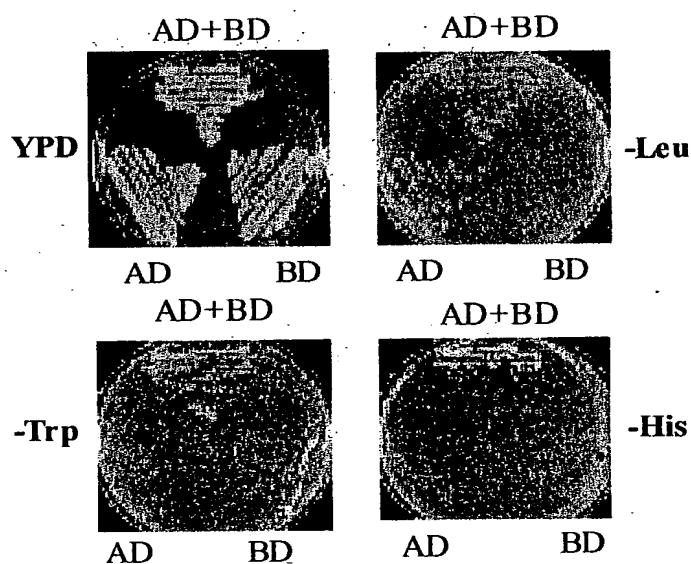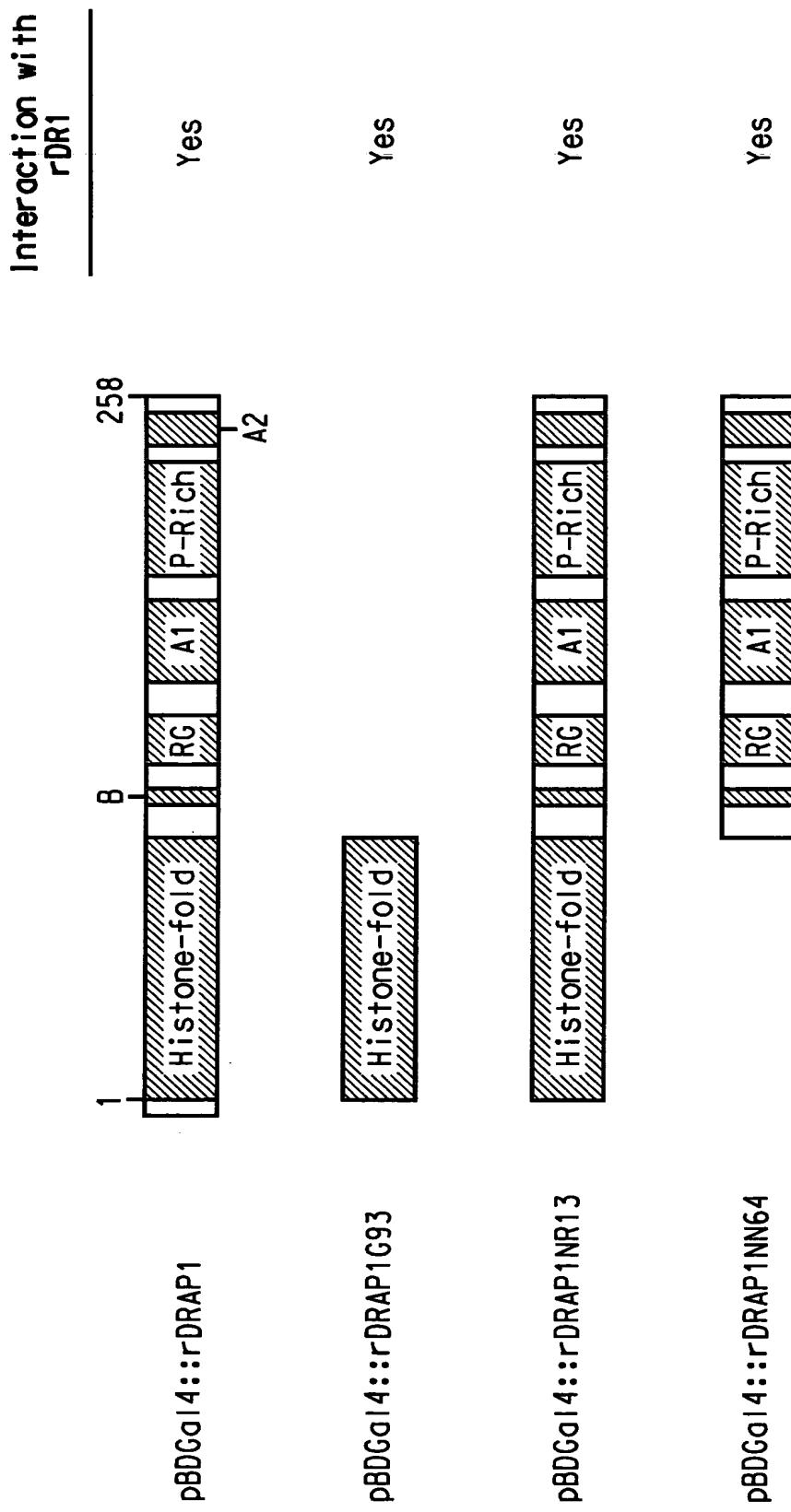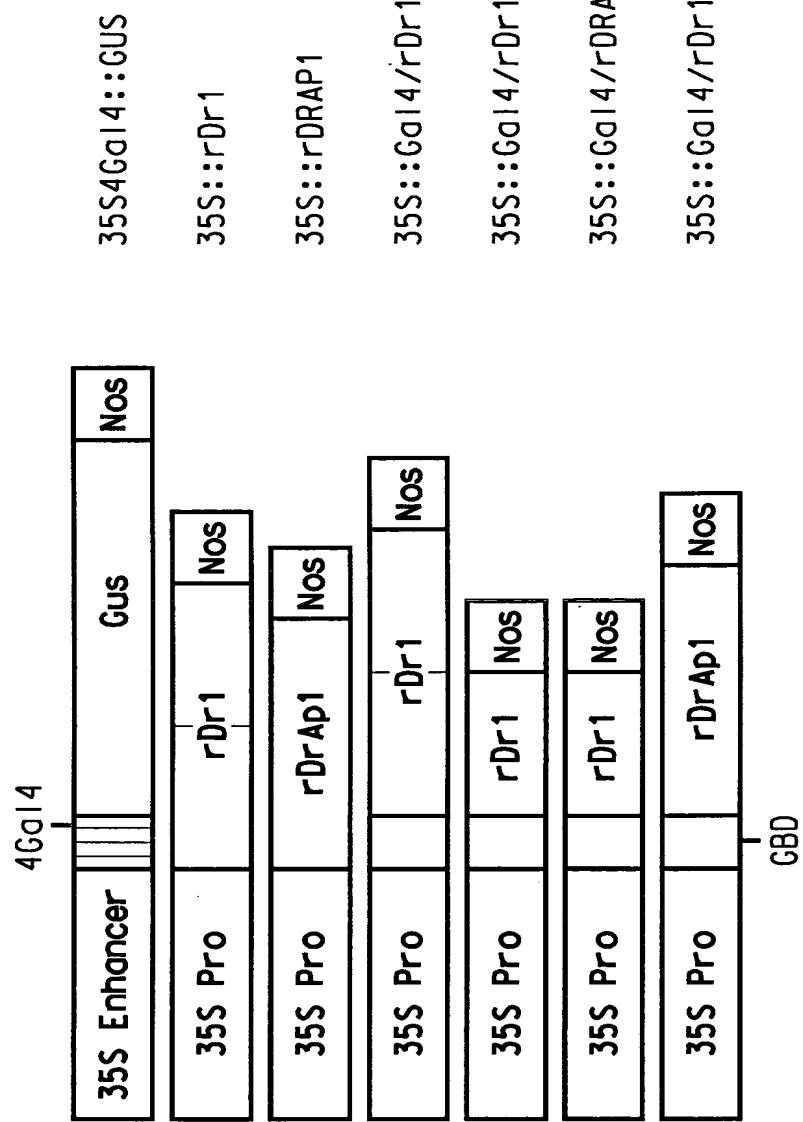
FIG. 6B

pRTL2-mGFP

| mGFP |

p35S::rDr1/mGFP
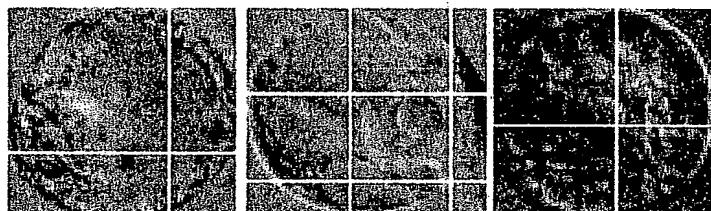
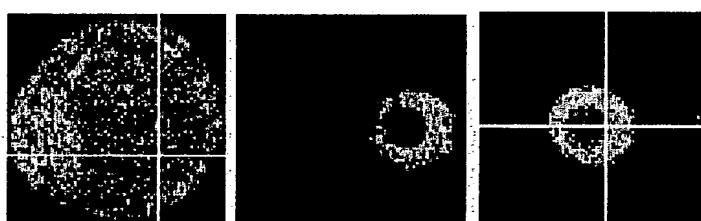| rDr1 | mGFP |

p35S::rDRAP1/mGFP

| rDRAP1 | mGFP |

F I G . 7A

DIC

GFP
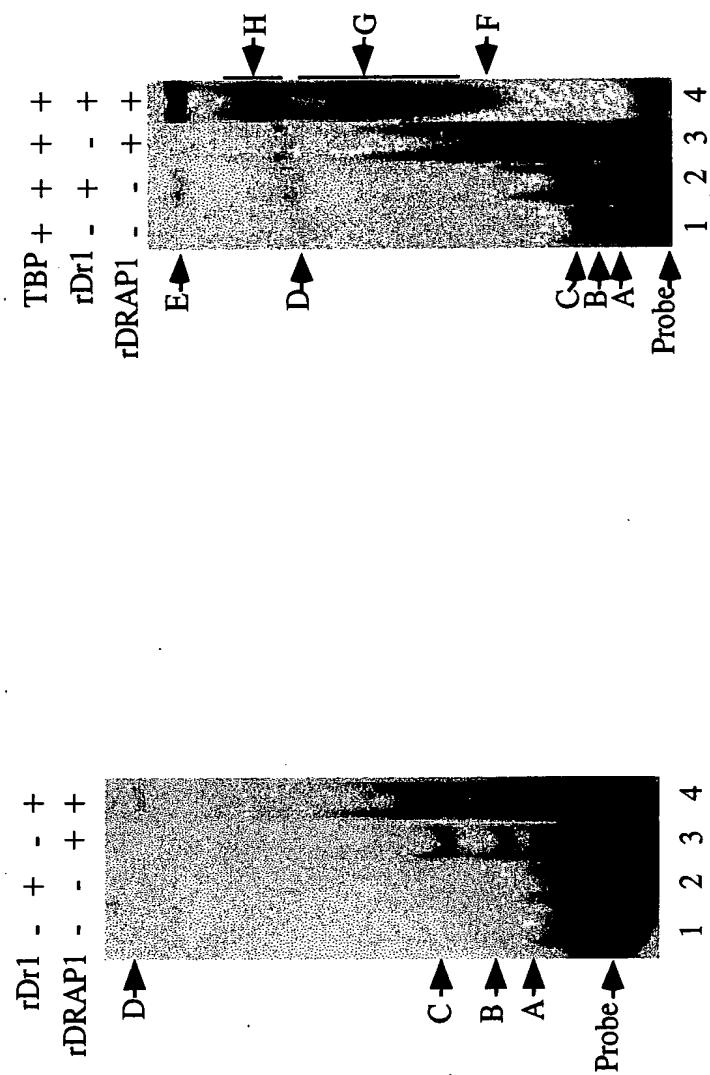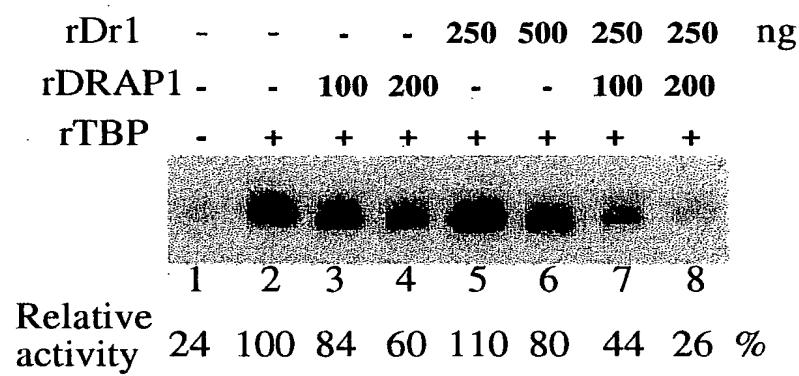
mGFP   rDr1/mGFP rDRAP1/mGFP

F I G . 7B

FIG. 8B

FIG. 8A

Title: Plant Genes Encoding DR1 & DRAP1 A
Global Repressor Complex of Transcription
Inventor: Stephen M. Allen
Application: Unknown
Docket: BB1107US CON

15/15

rDr1	–	–	–	–	250	500	250	250	ng
rDRAP1	–	–	100	200	–	–	100	200	
rTBP	–	+	+	+	+	+	+	+	

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| Relative activity | 24 | 100 | 84 | 60 | 110 | 80 | 44 | 26 | % |

FIG. 9